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ABSTRACT

This study evaluated a semester-long English learning strategy training course in terms of its impact on students' learning achievement, attitudes, anxiety, and proficiency. Participants were 47 Taiwanese college students who were randomly assigned to experimental or control groups. Prior to the course, all participants took the Test of English as a Foreign Language (TOEFL). During the first week of the semester, students completed the Strategy Inventory for Language Learning, the Motivational Intensity Questionnaire, and the Foreign Language Classroom Anxiety Scale. Experimental group students were taught English learning strategies through the semester, while control group students received no intervention. Students completed the evaluations again at the end of the semester. Results supported the assumption that language-learning strategies can be taught and can help foreign language learners in the learning process. Students who did not receive the strategy training did not have significant improvements in their language proficiency, learning motivation, or strategy use. Their strategy use even decreased in one area, and they had no significant decrease in their English learning anxiety levels. Students who received strategy training showed significant improvement in English proficiency, motivational intensity, and strategy use and significant decreases in English learning anxiety. (Contains 29 references.) (SM)

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It has been commonly believed that language learning strategy training would improve language learning and should be included in English instructions. However, not many of the studies in language learning strategy training have had conclusive results about its effects on language learning. According to researchers, these studies generally suffered various methodological problems. In Taiwan, although studies in language learning strategy have gained an increasing interest, rather few empirical studies have further explored the issue of strategy training. This study attempts to evaluate a semester-long English learning-strategy training course in terms of its effects in learners' learning achievement and learning attitudes. The participants of the study, 47 Taiwanese college students, were divided into the experimental group and the control group. The findings supported the assumptions that language-learning strategies are teachable and able to help foreign language learners' learning.

INTRODUCTION

With the development of second language learning strategy studies, in the recent decade, researchers have paid much more attention to strategy trainings than before. At the beginning, research on training second language learners to use learning strategies was limited almost exclusively to applications with vocabulary tasks (O'Malley & Chamot, 1990). Later, researchers (O'Mally, 1987; Chamot, 1993; Chamot & El-Dinary, 1999) tried to expand the strategy training to include more language skill areas. In native language contexts, learning strategy instructions have demonstrated as quite successful in improving learners' performance in various areas, which included reading comprehension, writing, and problem-solving (Derry, 1990; El-Dinary, et al., 1995; Gagne et al., 1993; Palincsar & Brown, 1985). However, in second language learning studies, not all the second language strategy training studies obtained successful results (Oxford, 1993). Researchers examined the strategy-training studies which showed no or negative effect and concluded that these studies usually "revealed some methodological problems that might have obscured some potentially important findings" (Oxford, 1993, p. 181).

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In Taiwan, researchers in English education have suggested the instructions of language learning strategies in improving learners' learning results. The identification of the teachability of language learning strategies in the EFL contexts of Taiwan becomes essential before promoting language learning strategy instructions for the assistance of the learners' foreign language learning.

This study aims to investigate the effect language learning strategy training might have on EFL learners' language learning results. To obtain a thorough view of learners' learning, the researcher evaluated the effect in terms of learners' English learning progress and the development in their attitudes toward English learning.

METHOD

The researcher used the experimental research method to attain the study goal. The English learning strategy-training course was offered at English department of a university in central Taiwan for one semester long. Forty-seven freshman students participated in this study: 35 belonged to the experimental group, and 12, the control group.

The researcher used four tests in assessing students' development in English proficiency, learning strategy use, and affective domain before and after the course. The comparisons of the performance of the control group and the experimental group on the four tests revealed the effects of the strategy training might have on learners' language learning.

Participants

The study took place in one university during the second semester of the school year. The university was located in a city in central Taiwan. The English learning strategy training was designed and offered by the researcher to English department, freshman year, as an elected course. All forty-seven students at freshman level participated in this study. The participants' ages ranged from 18 to 23. They have learned English for at least six years.

Among them, thirty-five students took the language learning strategy-training course; while the other twelve students did not. The participants took the same language skill courses at school, including pronunciation practice, basic listening and speaking practice, and basic reading and writing practice. Except for the courses offered by the department, none of the participants took extra courses to improve their language skills.

Instrumentation

Four tests were used in evaluating the participants' learning results before and after the language learning strategy training course: The Test of English as a Foreign Language (TOEFL), The Strategy Inventory for Language Learning (SILL), the Motivational Intensity Questionnaire, and the Foreign Language Classroom Anxiety Scale (FLCAS).

TOEFL is used to evaluate the English proficiency of individuals whose native language is not English. It is the test taken by most non-native speakers of English applying to North American universities (Hughes, 1989). In this study, it was used to assess the participants' English proficiency. The TOEFL test is composed of three sections: listening comprehension, structure and written expression, and reading comprehension. Its test items are multiple-choice questions with four possible answers per question. Although in some TOEFL tests, testees will also be required to write a short essay, the TOEFL tests the participants took in this study did not include an essay writing section.

The SILL, developed by Oxford (1990), was to investigate the frequency learners tend to use learning strategies in general. It has been widely used by many researchers in studying language learning strategies (Ehrman & Oxford, 1989; Yang, 1992; Ku, 1995; Huang, 1997, Chang & Huang, 1999). The inventory is composed of six parts, which are identical with the six language learning strategy categories proposed by Oxford: memory, cognitive, compensation, metacognitive, affective, and social strategies. The SILL uses a five-point scale, which ranges from "never or almost never" (point 1) to "always or almost always" (point 5). Averages for each part of the SILL indicate which strategy groups the learner tends to use most frequently (Huang, 1997). The SILL Version 7.0 containing 50 items is designed to assess the strategy use of English as-a-foreign-language learners.

The MIQ developed by Gardner (1985) aims to investigate the participants' motivational intensity in learning English as a second language. The questionnaire contains ten multiple-choice items. Respondents rate on a three-point scale, which is presented in a random order for the prevention of respondents' bias caused from their social desirability. Previous research demonstrated the questionnaire as having moderate reliability value (internal consistency alpha value of 0.75 in Hsiao's study, 1997, and 0.78 in Liao's pilot study, 2000). The Chinese version of the MIQ, translated and modified by Liao (2000), was presented to have a reasonable reliability and validity (p. 56).

The study used the FLCAS to assess the participants' anxiety degree in learning English. The FLCAS was developed by Horwitz, Horwitz, and Cope (1986) to

investigate foreign language learners' anxiety about target language learning. The questionnaire was developed with the contribution of the experience from 78 beginning foreign language-learning students at University of Texas in 1983. The items reflected communication apprehension, test anxiety, and fear of negative evaluation in the foreign language classroom. It has been adopted by researchers in Taiwan in anxiety-related studies (Cheng, 1998; Liao, 1999). The FLCAS contains 33 items. It uses a five-point scale ranging from "strongly disagree" (point 1) to "strongly agree" (point 5). Liao (1999) translated the FLCAS into Chinese, and revised a little on the wordings according to the respondents' background. She replaced "(foreign) language" in each item with "English" based on the respondents' target language being English. The FLCAS demonstrated a relatively high reliability. According to Horwitz et al. (1991), the internal reliability of the FLCAS achieved an alpha coefficient value of 0.93. The test-retest reliability over eight weeks showed an alpha value of 0.83. The FLCAS, Chinese version, revised by Liao (1999) presented an alpha coefficient of 0.92 based on the responses from 91 junior high school students in Taiwan.

Procedure

Before the strategy-training course, all participants took the TOEFL examination. They were also asked to respond to the SILL, the FLCAS, and the MIQ in the first week of the semester. For the experimental group, the teacher started to teach English learning strategies from the second week of the semester. For the control group, the researcher did not give any treatment to them. The post learning strategy investigations were conducted in the final week of the semester. All the participants were asked to take the TOEFL examination, and to respond to the SILL, the FLCAS, and the MIQ.

RESULTS

Proficiency Progress Differences

The participants' English proficiency levels were shown by their TOEFL scores. For the control group, the TOEFL mean score showed 517.27 with standard deviation of 29.20 at the pre-test, and 516.36 with standard deviation of 33.11 at the post-test. For the experimental group, the TOEFL mean score showed 504.57 with standard deviation of 26.56 at the pre-test, and 525.23 with standard deviation of 28.40 at the post-test. Comparing the pre-test and post-test of the control group, the statistics

showed that although there was a slight decrease in TOEFL scores, the difference did not show significance ($t = -0.10$, $p = 0.91 > 0.05$). For the experimental group, the difference between the pre-test and post-test showed a statistically significant increase in TOEFL scores ($t = 5.33$, $p = 0.00 < 0.05$). Table 1 presents the means, standard deviations, and the comparisons between the pre and post mean scores of the control group and the experimental group in TOEFL results.

Table 1

Mean, standard deviation, and comparisons in TOEFL scores

Group	Test	Mean	SD
control	pre-test	517.27	29.20
	post-test	516.36	33.11
experimental	pre-test	504.57	26.56
	post-test	525.23	28.40
group means compared		t	p-value
control pre vs. post		-0.10	0.91
experimental pre vs. post		5.33	0.00*

*p<0.05

Motivational Intensity Level Differences

The results from the MIQ showed the participants' changes in motivation before and after the program. The mean score of the control group was 2.30 in pre-test and 2.24 in post-test. Although the mean scores showed there was a decrease of the control group's motivational intensity value along the semester, the number was not statistically significant ($t = -1.0$, $p = 0.341 > 0.05$). The mean score of the experimental group was 2.15 for the pre-test, and 2.31, the post-test. The motivational intensity values showed a significant increase from the pre-test to the post-test ($t = -3.57$, $p = 0.001 < 0.05$). Table 2 shows the means, standard deviations, and the comparisons between the pre and post means of the control group and the experimental group.

English Learning Anxiety Level Differences

The results from the FLCAS presented the anxiety degree of the participants. For the control group, the pre-test mean score showed 3.23 with standard deviation of 0.58, and the post-test mean score, 3.06 with standard deviation of 0.59. For the experimental group, the pre-test mean score was 3.12 with standard deviation of 0.51, and the post-test mean score, 2.79 with standard deviation of 0.38. Although the anxiety degree of the control group showed a decrease (from 3.23 to 3.06), the

difference did not achieve a statistically significant level ($t = 1.49$, $p = 0.16 > 0.05$). The decrease of the anxiety degree of the experimental group from the pre-test to the post-test showed statistical significance (from 3.12 to 2.79, $t = 5.48$, $p = 0.00 < 0.05$). Table 3 shows the means, standard deviations, and the comparisons between the pre and post mean scores of the control group and the experimental group.

Table 2

Mean, standard deviation, and comparisons in motivational intensity

Group	Test	Mean	SD
control	pre-test	2.30	0.26
	post-test	2.24	0.21
experimental	pre-test	2.15	0.23
	post-test	2.31	0.21
group means compared		t	p-value
control pre vs. post		-1.00	0.341
experimental pre vs. post		-3.57	0.001*

*p<0.05

Table 3

Mean, standard deviation, and comparisons in anxiety degree

Group	Test	Mean	SD
control	pre-test	3.23	0.58
	post-test	3.06	0.59
experimental	pre-test	3.12	0.51
	post-test	2.79	0.38
group means compared		t	p-value
control pre vs. post		1.49	0.16
experimental pre vs. post		5.48	0.00*

*p<0.05

Learning Strategy Use Differences

The results from the SILL presented the language learning strategy use frequencies of the learners. For the control group, the pre-test mean score showed 3.09 with the standard deviation value of 0.49, and the post-test mean score, 3.13 with the standard deviation 0.29. For the experimental group, the pre-test mean score was 3.14 with the standard deviation value of 0.39, and the post-test mean score, 3.43 with the standard deviation 0.32. Although the means of the control group showed an increase from the pre-test to the post-test (from 3.09 to 3.13), the increase did not show statistical significance ($t = 0.38$, $p = 0.70 > 0.05$). For the experimental group,

the results presented a significant increase from the pre-test to the post-test (from 3.14 to 3.43, $t = 4.56$, $p = 0.00 < 0.05$). Table 4 presents the means, standard deviations, and the comparisons between the pre and post mean scores of the control group and the experimental group in general strategy use.

Table 4

Mean, standard deviation, and comparisons in language learning strategy uses

Group	Test	Mean	SD
control	pre-test	3.09	0.49
	post-test	3.13	0.29
experimental	pre-test	3.14	0.39
	post-test	3.43	0.32
group means compared		t	p-value
control pre vs. post		0.38	0.70
experimental pre vs. post		4.56	0.00*

*p<0.05

The participants' learning strategy uses in a more detailed look were presented from the SILL subcategories: memory, cognitive, compensation, metacognitive, affective, and social strategy categories. For the control group, in memory strategy use, the mean score of the pre-test showed 2.63 with the standard deviation of 0.50, and the post-test mean score, 2.78 with the standard deviation of 0.37. The increase in the mean scores of the memory strategy use did not show statistical significance ($t = 1.59$, $p = 0.14 > 0.05$). In cognitive strategy use, the mean score of the pre-test was 3.25 with the standard deviation of 0.56, and the post-test mean score, 3.31 with the standard deviation of 0.31. The increase on the mean scores from the pre-test to the post-test did not show statistical significance ($t = 0.50$, $p = 0.62 > 0.05$). In compensation strategy use, the pre-test mean score showed 3.04 with the standard deviation of 0.69, and the post-test mean score, 3.42 with the standard deviation of 0.43. Similarly, the increase of the mean scores from the pre-test to the post-test did not show statistical significance ($t = 2.10$, $p = 0.06 > 0.05$). In metacognitive strategy use, the mean score of the pre-test was 3.38 with the standard deviation of 0.71, and the mean score of the post-test, 3.11 with the standard deviation of 0.38. The decrease of the mean scores from the pre-test to the post-test did not show statistical significance ($t = -1.55$, $p = 0.15 > 0.05$). In affective strategy use, the pre-test mean score was 3.03 with the standard deviation of 0.60, and the post-test mean score, 3.01 with the standard deviation of 0.47. The decrease of the means from the pre-test to the post-test showed no statistical significance ($t = -0.09$, $p = 0.93 > 0.05$). Finally, in social strategy use, the pre-test mean score was 3.11 with the standard deviation of

0.62, and the post-test mean score, 3.10 with the standard deviation of 0.66. The slight decrease in the mean scores from the pre-test to the post-test did not show statistical significance ($t = -0.01$, $p = 0.98 > 0.05$).

For the experimental group, in memory strategy use, the mean score showed 2.65 for the pre-test with the standard deviation of 0.55, and 3.18 for the post-test with the standard deviation of 0.41. The increase in the mean score from the pre-test to the post-test showed statistical significance ($t = 5.68$, $p = 0.00<0.05$). In cognitive strategy use, the mean score was 3.21 at the pre-test with standard deviation of 0.50, and 3.57 at the post-test with standard deviation of 0.35. The increase in the mean score from the pre-test to the post-test was statistically significant ($t = 4.65$, $p = 0.00<0.05$). In compensation strategy use, the pre-test mean score showed 3.61 with standard deviation of 0.56, and the post-test mean score, 3.80 with standard deviation of 0.56. The increase was statistically significant ($t = 2.03$, $p = 0.04 < 0.05$). In metacognitive strategy use, the mean score of the pre-test was 3.19 with standard deviation of 0.54, and of the post-test, 3.41 with standard deviation of 0.54. The increase in the mean score from the pre-test to the post-test was statistically significant ($t = 2.32$, $p = 0.02 < 0.05$). In affective strategy use, the mean score of the pre-test was 3.25 with standard deviation of 0.67, and of the post-test, 3.48 with standard deviation of 0.60. The increase in the mean score from the pre-test to the post-test did not show statistical significance ($t = 1.97$, $p = 0.056 > 0.05$). In social strategy use, the mean score of the pre-test was 3.07 with standard deviation of 0.58, and of the post-test, 3.11 with standard deviation of 0.49. The increase in the mean score from the pre-test to the post-test did not show statistical significance ($t = 0.43$, $p = 0.66 > 0.05$).

DISCUSSION

Results of the study showed that students who did not receive the strategy training did not have significant improvement in language proficiency, learning motivational intensity, and strategy use. Their strategy uses even decreased in the indirect strategy category, which included metacognitive, social, and affective strategies. In addition, students in the control group did not show a significant decrease in their English learning anxiety level. On the contrary, students who received strategy trainings showed significant improvement in English proficiency, motivational intensity, and strategy uses. Moreover, they did show a significant decrease in English learning anxiety.

The significant increase of the experimental group students and the non-significant increase of the control group students in English proficiency between

the pre-test and the post-test indicated the effect of strategy trainings on learners' English proficiency development. According to Thompson and Rubin (1996), "ample evidence links strategy instruction to improved performance" (p. 332). In addition, strategy trainings were believed to enhance the product of language learning (Oxford et al., 1990; Garcia & Pintrich, 1995). The results of the study support the assumption that language learning strategy training helps improve language proficiency.

The results of the study also showed that the experimental group students had a significant increase in motivational intensity from the pre-test to the post-test; while the control group students did not show a significant increase. The results revealed the effect the strategy trainings may have on learners' English-learning motivational improvement. Guthrie et al. (2000), reviewing the research in the relation between motivation and strategy use, concluded that strategy instruction has correlation with motivation for learning. "Effective strategy instruction increases...their [students'] awareness of competence, which is motivating" (p. 331). The motivational improvement shown in this study supports the point that language learning strategy trainings help learners become more motivated in language learning.

Moreover, in this study; the experimental group students' English learning anxiety level has been significantly reduced from the pre-test to the post-test. However, the anxiety level of the control group students was not significantly reduced. The results implied that learning strategy trainings play an important role in helping learners become less anxious along the process of foreign language learning. The results show agreement with the results of Mckeachie's study, where it was found that there was a significant interaction between anxiety and the "learning to learn" course (1984, p. 9). The effects of learning strategy trainings on language learning motivation and anxiety support the assumption that strategy training helps improve learning in affective domain (Oxford et al, 1990).

In learning strategy use, results of the study showed that students in experimental group used learning strategies significantly more frequently after the training than before the training. Students in the control group did not show significantly more frequent use of learning strategies from the pre-test to the post-test. The mean scores of the control group even decreased in the use of indirect strategies, which included metacognitive, social, and affective strategies. According to Oxford (1990), indirect strategies support and manage language learning without directly involving the target language. It seems that without receiving learning strategy training, students are not able to maintain the use of the strategies which do not directly involve the target language, but which still play an important role in assisting language learning. The results support the assumption made by previous research that strategy training can enhance the process of language learning (Oxford et al., 1990; Hargett et al., 1994).

Strategy trainings help maintain and improve learners' learning strategy use. Moreover, the significant increase of learning strategy use frequencies of the experimental group from before to after the learning strategy training reveals that learning strategies are teachable.

Although in O'Malley's (1987) study, Asian students in the treatment group tended to perform more poorly than those in the control group, the students in the present study demonstrated an opposite way. In O'Malley's study (1987), one of the explanations for the failure of Asian students in the treatment groups to perform better than those in the control group was the persistence of familiar strategies of the learners (p. 141). The treatment group in O'Malley's study received strategy training fifty minutes daily for eight days in roughly a two-week period (O'Malley, 1987; p. 136). In the current study, students in the experimental group received strategy training three hours a week for about 16 weeks. In this study, students in the experimental group seemed to have more time to become familiar with the strategies, which has endorsed the assumption of O'Malley, "the treatment groups needed time to gain familiarity with the strategies" (p. 141).

Since language learning strategy training helps improve learners' learning in learning achievement, affective domain, and learning process, the instruction of language learning strategies is necessary in language training programs. The training format needs to be chosen depending on the goal of the training program. In this study, the training was conducted on a course base, being independent from language training courses. This was decided based on the content and the time limit of the training. However, previous studies recognized the combination of learning strategy training with language trainings. Whatever format may be decided, the training of language learning strategies needs to be done to help learners learn effectively.

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